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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/607,096	06/29/2000	Menachem Levanoni	YOR9-2000-0431US1	8138

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IBM Corporation  
Intellectual Property Law Dept  
P O Box 218  
Yorktown Heights, NY 10598

EXAMINER

STIMPAK, JOHNNA

ART UNIT PAPER NUMBER

3623

DATE MAILED: 10/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/607,096

Applicant(s)

LEVANONI ET AL.

Examiner

Johnna R Stimpak

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. The following is a second Office Action upon examination of application number 09/607/096. Claim 11 was added. Claims 1-11 are pending and have been examined on the merits discussed below.

### ***Response to Amendment***

2. In response to Applicant's argument that the TSI article is non-enabling, it is respectfully submitted that when a disclosure of software is required, it is generally sufficient if the functions of the software are disclosed since the creation of specific source code is within the skill of one of ordinary skill in the art. See *Fonar Corp. v. General Electric Co.*, 41 USPQ2d 1801 (Fed. Cir. 1997); *In re Hayes Microcomputer Products Inc. Patent Litigation*, 25 USPQ2d 1241 (Fed. Cir. 1992). The functionality of the TSI models and the fact that the TSI models are described as part of a customized software tool (from Solutions, [www.grossprofit.com/pages/solutions](http://www.grossprofit.com/pages/solutions) found on [www.archive.net](http://www.archive.net)) has been relied upon in the art rejection of record and it is presumed that one of ordinary skill in the art at the time of Applicant's invention would have known how to make and use a system, method, and/or computer program product with this disclosed functionality for the aforementioned reasons. Therefore, Examiner submits that the applied references are sufficiently enabling to support their respective art rejections and Applicant's arguments are non-persuasive.

3. In response to Applicants argument that TSI does not teach a second set of merchandise is used as a referent for a first set of merchandise, using merchandise information to predict for current merchandise, as taught by TSI still reads upon the claim language.

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4. As for the Applicant's argument that TSI does not teach clustering the second set of merchandise for generating a demand profile for the pre-determined attribute of the first set of merchandise, TSI uses the second set of merchandise to analyze historical data profiling the merchandise sold which is used to make predictions (page 2, paragraphs 1 and 2).

5. As for the Applicant's argument on "clustering is used on the referent set of data to develop a model", TSI teaches grouping prior merchandise information to use for forecasting or predicting future demand. This gathering of data, or grouping, can be construed as clustering the data.

6. In regards to Applicant's remark about the use of Official Notice, the Applicant is correct that the Examiner would have to provide references to support her use of Official Notice, but only if the Applicant makes a "seasonable challenge" regarding this use of Official Notice so that on its face it creates reasonable doubt.

The Applicant's challenge to the Examiner's use of Official Notice has not sufficiently created the reasonable doubt necessary to switch the burden back to the Examiner in regards to producing references to support the Official Notice.

7. For reasons stated above, Applicant's remarks have not been sufficient to overcome the prior rejections; therefore the prior rejections are being upheld and have been reproduced below for convenience. New rejections to newly added claim 11 is also included.

***Claim Rejections - 35 USC § 101***

8. Claims 1-9 and 11 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

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The basis of this rejection is set forth in a two-prong test of:

- (1) whether the invention is within the technological arts; and
- (2) whether the invention produces a useful, concrete, and tangible result.

For a claimed invention to be statutory, the claimed invention must be within the technological arts. Mere ideas in the that do not apply, involve, use, or advance the technological arts fail to promote the "progress of science and the useful arts" (i.e., the physical sciences as opposed to social sciences, for example) and therefore are found to be non-statutory subject matter.

In the present case, claims 1-9 and 11 only recite an abstract idea. The recited steps of merely specifying sets of merchandise to generate a profile for projecting demand does not apply, involve, use, or advance the technological arts since all of the recited steps can be performed in the mind of the user or by use of a pencil and paper. These steps only constitute an idea of project demand using merchandise information

As to technological arts recited in the preamble of claims 9 and 11, mere recitation in the preamble (i.e., intended or field of use) or mere implication of employing a machine or article of manufacture to perform some or all of the recited steps does not confer statutory subject matter to an otherwise abstract idea unless there is positive recitation in the claim as a whole to breathe life and meaning into the preamble. In the present case, none of the recited steps are directed to anything in the technological arts as explained above with the exception of the recitation in the preamble that the method is "computerized". Looking at the claim as a whole, nothing the body of the claim recites any structure or functionality to suggest that a computer performs the recited steps. Therefore, the preamble is taken to merely recite a field of use.

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Additionally, for a claimed invention to be statutory, the claimed invention must produce a useful, concrete, and tangible result. In the present case, the claimed invention produces projected demand of the merchandise (i.e., repeatable, useful and tangible).

Although the recited process produces a useful, concrete, and tangible result, since the claimed invention, as a whole, is not within the technological arts as explained above, claims 1-9 are deemed to be directed to non-statutory subject matter.

***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. **Claims 1, 4-5, 7, and 9** are rejected under 35 U.S.C. 102(b) as being anticipated by "Company Makes Science Out of Shopping Trends" Boston Business Journal. 3 September 1998 about Technology Strategy Inc. ([www.grossprofit.com](http://www.grossprofit.com)).

As per **claim 1**, Technology Strategy Inc. discloses a method suitable for projecting demand, the method comprising the steps of:

(i) identifying a first set of merchandise (see page 2, paragraph 4, different items of clothing are selected as the first set of merchandise);

(ii) specifying a second set of merchandise which is to be used as a referent for soliciting information relative which is to be used as a referent for soliciting information relative to demand behavior for a pre-determined attribute of said first set of

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merchandise (see page 2, paragraph 2, a second set of retail merchandise is used to determine the demand behaviors of a pre-determined attribute of the first set of merchandise);

(iii) clustering the second set of merchandise for generating a demand profile for said pre-determined attribute of said first set of merchandise (see page 1, paragraph 59, and page 2, paragraphs 1-2, the merchandise demand profile is created for attributes of the merchandise);

(iv) clustering the second set of merchandise for generating a demand model correlated to model-based demand attributes of said first set of merchandise (see page 2, and paragraphs 2-4, the demand model is correlated to the attributed of the first merchandise); and

(v) combining the step (iii) demand profile and the step (iv) model into a single encompassing model which is capable of projecting demand of the first set of merchandise (see page 2, paragraphs 2-4, the demand profile and the demand model project the demand for the merchandise).

As per **claim 4**, Technology Strategy Inc. discloses a method according to claim 1, comprising the step of selecting the pre-determined attribute of said first set of merchandise from the group consisting of item, size, and location (see page 1, paragraph 6, the item and size of the item is disclosed, also see page 2, paragraph 3, the region, or location, is also disclosed).

As per **claim 5**, Technology Strategy Inc. discloses a method according to claim 1, comprising the step of selecting a pre-determined attribute of said first set of merchandise from the group consisting of item, size, color, and location (see page 1,

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paragraph 6, the item and size of the item is disclosed; also see page 2, paragraph 3, the region, or location, is also disclosed)

As per **claim 7**, Technology Strategy Inc. discloses a method of claim 1, wherein the step (iv) comprises generating a demand model based on modeling demand as a function of major variables selected from a group consisting of price, promotions, inventory level, and seasonal effects (see page 1, paragraph 6, price is incorporated into the model; also see page 2, paragraph 3, inventory level is incorporated into the model).

As per **claim 9**, Technology Strategy Inc. discloses a computer implemented method comprising the steps of:

(i) identifying a first set of merchandise (see page 2, paragraph 4, different items of clothing are selected as the first set of merchandise);

(ii) specifying a second set of merchandise which is to be used as a referent for soliciting information relative to demand behavior for a pre-determined attribute of said first set of merchandise (see page 2, paragraph 2, a second set of retail merchandise is used to determine the demand behaviors of a pre-determined attribute of the first set of merchandise);

(iii) clustering the second set of merchandise for generating a demand profile for said pre-determined attribute of said first set of merchandise (see page 1, paragraph 59, and page 2, paragraphs 1-2, the merchandise demand profile is created for attributes of the merchandise);



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(iv) clustering the second set of merchandise for generating a demand model correlated to model-based demand attributed of said first set of merchandise (see page 2, and paragraphs 2-4, the demand model is correlated to the attributed of the first merchandise); and

(v) combining the step (iii) demand profile and the step (iv) demand model into a single encompassing model which is capable of projecting demand of the first set of merchandise (see page 2, paragraphs 2-4, the demand profile and the demand model project the demand for the merchandise).

As per **claim 11**, Technology Strategy Inc. discloses a computer implemented method comprising the steps of:

(i) receiving data for a first set of merchandise (see page 2, paragraph 4, different items of clothing are selected as the first set of merchandise);

(ii) receiving data for a second set of merchandise which is to be used as a referent for soliciting information relative to demand behavior for a pre-determined attribute of said first set of merchandise (see page 2, paragraph 2, a second set of retail merchandise is used to determine the demand behaviors of a pre-determined attribute of the first set of merchandise);

(iii) clustering the data for the second set of merchandise to generate a model capable of projecting demand of the first set of merchandise (see page 2, paragraphs 2-4, the demand profile and the demand model project the demand for the merchandise).

***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. **Claims 2-3, 6, 8, and 10** are rejected under 35 U.S.C. 103(a) as being unpatentable over Technology Strategy Inc.

As per **claim 2**, Technology Strategy Inc. discloses a method according to claim 1. Technology Strategy Inc. does not explicitly disclose wherein said first and second set of merchandise are disparate. However, it is old and well known in the art for the merchandise in a model to be disparate. Therefore, it would be obvious to one of ordinary skill in the art at the time of the invention to have disparate merchandise as it would allow TSI to pick two separate and distinct retail items to predict future demand. By having two disparate items, TSI will be able to find trends throughout the retail store rather than in a specific type of clothing or brand.

As per **claim 3**, Technology Strategy Inc. discloses a method according to claim 1. Technology Strategy Inc. does not explicitly wherein said first and second set of merchandise overlap. However, it is old and well known in the art to teach merchandise in a model to overlap. Therefore, it would be obvious to one of ordinary skill in the art at the time of the invention to have the merchandise overlap as it would allow TSI to forecast future retail inventory sales and purchases based on the way similar retail items have sold thus reducing the retail owners risk of profit loss from the first set of retail items.

As per **claim 6**, Technology Strategy Inc. discloses a method according to claim 1. Technology Strategy Inc. does not explicitly does not explicitly disclose wherein step (iii) comprises clustering the second set of merchandise by utilizing an algorithm which partitions this set into non-overlapping clusters with similar size profiles. However, it is old and well known in the art to disclose an algorithm with non-overlapping clusters with similar size profiles. Therefore, it would have been obvious to one of ordinary skill in the art to disclose an algorithm with non-overlapping clusters with similar size profiles as one would want to compare data of the same size to accurately forecast future demand.

As per **claim 8**, Technology Strategy Inc. discloses a method according to claim 1, wherein step (v) comprises combining the demand profile and the demand model into a single encompassing model by apportioning the model-based demand forecast (see page 2, paragraphs 2-4, the demand profile and the demand model project the demand for the merchandise). Technology Strategy Inc. does not explicitly disclose having the appropriate size distribution using a size demand profile. However, it is old and well known in the art to disclose have a reasonable size distribution for the demand profile to ensure accurate results. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have an appropriate size distribution in the demand profile as it increases the reliability of the data used to forecast demand and provides a more accurate and reliable forecast.

As per **claim 10**, Technology Strategy Inc. discloses a computer suitable for projecting demand, the computer comprising:

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(i) an identified first set of merchandise (see page 2, paragraph 4, different items of clothing are selected as the first set of merchandise);

(ii) an identified second set of merchandise which is to be used as a referent for soliciting information relative to demand behavior for a pre-determined attribute of said first set of merchandise (see page 2, paragraph 2, a second set of retail merchandise is used to determine the demand behaviors of a pre-determined attribute of the first set of merchandise);

(a) clustering the second set of merchandise for generating a demand profile for said pre-determined attribute of said first set of merchandise (see page 1, paragraph 59, and page 2, paragraphs 1-2, the merchandise demand profile is created for attributes of the merchandise);

(b) clustering the second set of merchandise for generating a demand model correlated to model-based demand attributed of said first set of merchandise (see page 2, and paragraphs 2-4, the demand model is correlated to the attributed of the first merchandise); and

(c) combining the demand profile and the demand model into a single encompassing model which is capable of projecting demand of the first set of merchandise (see page 2, paragraphs 2-4, the demand profile and the demand model project the demand for the merchandise); and a demand forecast by the pre-determined attribute (see page 2, paragraphs 1-4, a demand is forecasted by the pre-determined attribute).

Technology Strategy Inc. does not explicitly disclose a database or a CPU receiving inputs from the database, or an output display. However, it is old and well known in the art that a computer is used to solve difficult and complex algorithm. A computer inherently contains a CPU and an output display. The use of a database is also old and well known in the art to store

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information and data. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have a database, a CPU, and an output display as it allows a user to more easily compute complex computations.

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***Conclusion***

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Johnna Stimpak** whose telephone number is **703-305-4566**. The examiner can normally be reached Monday through Friday from 8:00 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Tariq Hafiz**, can be reached on **703-305-9643**.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **Receptionist** whose telephone number is **703-308-1113**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

Or faxed to:

703-305-7687

[Official communications; including  
After Final communications labeled  
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703-746-3956

[Informal/Draft communications, labeled  
"PROPOSED" or "DRAFT"]

Hand delivered responses should be brought to Crystal Park 5, 2451 Crystal Drive, Arlington, VA, 7<sup>th</sup> Floor.

  
**TARIQ R. HAFIZ**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 3600**